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Decentralization of Water Supply and
Sanitation Systems in Central America
and the Dominican Republic

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by

Fred Rosensweig
and
Eduardo Perez

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ABOUT THE AUTHORS

Fred Rosensweig is the Technical Director for Human Resources and Institutional Development for EHP and a Vice President of Training Resources Group. His expertise includes the organization of the water and sanitation sector, policy analysis and implementation, and the design of institutional strengthening programs. He has worked on decentralization of water and sanitation services in Slovakia, Ecuador, Tunisia, and Central America. He has lived in Senegal, Cameroon, and Tunisia and carried out short-term technical assistance in more than 30 countries worldwide.

Eduardo Perez, an environmental engineer, program planner, and public policy specialist, has over 23 years of experience in water supply and sanitation, housing, urban development, and urban environmental sanitation. He is currently the EHP Technical Director for Engineering and Technology. He has worked on the WASH Project and EHP for the past six years directing and managing short-term technical assistance activities in support of USAID's environmental health programs. He also directs applied research efforts identifying lessons learned and best practices in providing basic environmental health services such as water supply, sanitation, solid waste management, and drainage to the urban poor. From 1985 to 1991, he was Country Director for the Cooperative Housing Foundation in Tegucigalpa, Honduras. In that capacity, he provided training and technical assistance to Honduran NGOs to implement home improvement and sanitation improvement loan programs for poor families living in the peri-urban/informal areas of primary and secondary cities of Honduras.

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This document summarizes a series of challenging activities that were successful because of the commitment of many people both in Washington DC and in the countries we worked in. The various team members who worked in each of the activities are listed in Appendix A and the authors acknowledge their important respective contributions. We are particularly appreciative of the efforts of key EHP staff and consultants including David Fernandes, Carlos Linares, Dan Edwards, and Christine Lenhoff.

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ACRONYMS

ANDA	National Water and Sewer Company (El Salvador)
DECNET	Decentralization Network
DR	Dominican Republic
EHP	Environmental Health Project
ESA	external support agency
GODR	Government of the Dominican Republic
IDB	Interamerican Development Bank
INAA	National Water and Sanitation Agency (Nicaragua)
INAPA	National Institute for Potable Water and Sewerage (Dominican Republic)
JAIF	Joint Action Incentive Fund
NGO	nongovernmental organization
PAHO	Pan American Health Organization
SANAA	National Water and Sewer Company (Honduras)
SESPAS	Ministry of Health (Dominican Republic)
SO	Strategic Objective
TOM	Technician for Operations and Maintenance
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WS&S	water supply and sanitation

EXECUTIVE SUMMARY

In May 1998, USAID requested the Environmental Health Project (EHP) to carry out a regional activity on the decentralization of water supply and sanitation (WS&S) in Central America and the Dominican Republic. The regional activity was developed by the Water Team in USAID/Washington with funding from the Joint Action Incentive Fund (JAIF). JAIF was designed to promote collaboration among the different technical centers. Decentralization was an appropriate issue for JAIF since it can easily be looked at from multiple perspectives including democracy, health, and environment as well as improved provision of water and sanitation services. The activity targeted Honduras, El Salvador, Nicaragua, Guatemala, and the Dominican Republic.

The activity had four objectives:

- C Provide technical assistance to selected missions engaged in decentralization of water and sanitation systems
- C Draw lessons learned from the efforts of USAID and others
- C Disseminate the lessons learned to interested individuals and organizations
- C Promote sharing of experience among the Central American countries

Decentralization is a timely issue in the region. Nearly every country is trying to modernize and reform its WS&S. Reform of the WS&S sector in these countries is part of and not independent from broader water resources sectoral reform efforts and modernization of the state initiatives. USAID is involved in decentralization of the water and sanitation sector and is also involved in efforts to improve water resources management, municipalization, and health programs. All of these sectors have a different perspective on the reform process. EHP made a conscious decision not to advocate a particular model of reform but rather to play a neutral role and act as a facilitator. This proved to be a very important decision in that all sides were willing to engage in the process since they knew EHP was trying to act as an honest broker.

Activities

The activity, which was implemented over a one-year period beginning in June 1998, consisted of five main activities:

- C Conducting a regional analysis of the current status of decentralization in the five target countries
- C Providing technical assistance to El Salvador in the development of a national decentralization policy
- C Providing technical assistance to the Dominican Republic in developing and implementing a national strategy to decentralize rural WS&S services
- C Establishing an Internet-based decentralization network
- C Organizing a regional workshop in Antigua, Guatemala, on April 28-29, 1999, for 66 participants from the five target countries as well as representatives from the U.S. headquarters of UNICEF and the Pan American Health Organization (PAHO).

Results

- C The basic conclusion of the regional analysis is that while most countries have been talking about reform, efforts have resulted in limited progress to date. State corporations with a national mandate for urban provision still dominate the formal urban sector, complemented by municipal arrangements in smaller cities. Only Nicaragua has enacted a comprehensive reform. In rural and peri-urban areas, nongovernmental organizations (NGOs) have tried to fill the vacuum left by the national government, but have not come close to meeting the large need. The balance between national companies and municipal providers varies considerably by country. In Guatemala, virtually all urban systems are municipally owned and operated. In Honduras, municipal providers account for 62% of urban water connections, but in El Salvador and Nicaragua, only 20% and 10%, respectively, of connections are provided by

municipalities. The Dominican Republic has no municipal operators. Rural WS&S is theoretically the responsibility of the rural departments of the state water companies.

- C In El Salvador, USAID assistance created a participatory process that involved multiple interests. The discussion on decentralization was broadened to include a wider range of concerns including environment and municipal development. USAID is now positioned as a key player in the national dialogue. The new government of President Flores has recently announced that the decentralization of water and sanitation services to municipalities is one of his main priorities.
- C In the Dominican Republic, USAID is established as a credible and effective player in the policy reform process, and attention is being paid to the rural sector. In addition, the National Institute for Potable Water and Sewerage (INAPA) has made the policy decision to move forward with the implementation of the decentralization strategy designed by EHP.
- C EHP has established an electronic decentralization network with 142 members from 17 countries.
- C The regional workshop was very successful in promoting the exchange of information and experiences. The country delegations also became closer as many had not worked together before and were operating under very different paradigms for decentralization. The paradigm for reform was also broadened and resulted in a heightened appreciation of the need to take into account a range of perspectives including democracy, health, and environment. During the workshop several key themes emerged from the presentations, case studies, and group discussions:
 - C Reforming the sector requires the involvement of a broad constituency and multiple perspectives including the water and sanitation sector itself, local government, health, and environment.
 - C The use of a participatory process that involves the key actors at national and municipal levels is a key element of any reform program. Without meaningful participation, the reform is much less likely to take into account the interests of

all parties and gain support.

- C In any reform process, explicit attention must be paid to the rural and urban poor to ensure they are not overlooked.
- C Each country needs to develop its own approach to reform since circumstances vary in each country. No one model is applicable in all situations.
- C Political will is a key ingredient in successful reform efforts. Achieving consensus at the political level is virtually a prerequisite for reform.
- C Separation of the planning and regulatory functions from the operating function is a necessary condition of any reform program.
- C Decentralized approaches are elemental to bringing improved water and wastewater services to consumers.

Lessons Learned

- C There is significant and growing interest within the region in the reform of the WS&S sector and decentralization.
- C The issues relating to decentralization of WS&S services are common although the solutions may vary by country.
- C USAID can bring added value to the process by bringing an integrated perspective to this issue.
- C Pilot demonstration activities can have great value in demonstrating what is possible.
- C It is important to work both “bottom up” and “top down” on decentralization.
- C Both the pilot activities and the “bottom-up” activities showed that a lot can be and ought to be accomplished within the existing regulatory/policy framework to move the reform process along.

Next Steps

This activity was highly successful and has generated significant interest in USAID/Washington and in the region. To keep the momentum going, USAID may want to consider continued support. At the country level, three USAID missions are planning follow-up activities. In El Salvador, the mission is actively considering follow-up to the national policy

discussions. In the Dominican Republic, the mission has already agreed to provide funding to support the rural decentralization strategy. In Nicaragua, the recently begun Mitch reconstruction program is designed to work within the new decentralization structure and provide assistance to strengthen it.

Several activities are suggested at the regional level that would benefit all the countries. These activities include the documentation of successful examples of decentralization, guidance on the often contentious issue of regulation, the

continued promotion of information exchange, guidance on how to include the rural and urban poor in the reform process, and guidance on how to include health and environmental concerns in decentralization.

USAID might want to consider similar activities in other regions. It is also important to continue collaboration with other donors, especially the Interamerican Development Bank, PAHO, and UNICEF. Finally, USAID can play an important role in promoting other cross-sectoral efforts like JAIF.

1 INTRODUCTION

1.1 Background

In May 1998, USAID requested the Environmental Health Project (EHP) to carry out a regional activity on the decentralization of water supply and sanitation in Central America and the Dominican Republic. The regional activity was developed by the Water Team in USAID/Washington with funding from the Joint Action Incentive Fund (JAIF). The Water Team is an interest group made up of USAID staff from different bureaus who are interested in water issues. JAIF was set up by the Assistant Administrator of the Global Bureau to promote collaboration among the different technical centers.

Decentralization of water supply and sanitation systems can follow one of three broad models. *Devolution* involves transferring responsibility to local government. This is the model that is most often talked about since it is consistent with municipal decentralization. *Deconcentration* is the transfer of responsibility to autonomous regional offices of a national agency. *Delegation* is assigning responsibility to a third-party organization such as a private company or a regional public company. Examples of these three models can be found in Central America and the Dominican Republic.

Decentralization of water supply and sanitation services was a particularly appropriate issue for JAIF to address since it can be looked at from multiple perspectives including democracy, improved provision of water and sanitation services, health, and environment. All the countries in the region are seeking ways to modernize and reform their water supply and sanitation sectors and improve services. Reform of this sector in these countries is part of and not independent from broader water resources sectoral reform efforts and modernization of the state initiatives. USAID is also involved in efforts to improve water resources management,

municipalization, and health programs. Although for years USAID has had programs to extend services in rural communities and small municipalities, the Interamerican Development Bank (IDB) has been the lead donor in financing investments and in promoting sector reform in the region.

Nearly every country in the Central American region has been looking at ways to promote municipal decentralization. USAID has been active in supporting programs to strengthen local government in most countries in the region. Since water and sanitation is a locally provided service, it has long been part of USAID's municipal strengthening programs.

Environmental concerns, such as contamination of surface water supplies, poor agricultural practices that threaten groundwater supplies, and conflict over water uses and water rights, have also increased. These problems are tightly linked to the provision of water supply and sanitation services in that local governments are seen as part of the solution to addressing some of these environmental problems. Some countries allow a degree of municipal regulation, a tool that is not frequently used. In addition to environmental concerns, the lack of access to safe drinking water and sanitation results in a high incidence of waterborne diseases. Although many understand the connection between water and sanitation and health, little has been done to ensure that health benefits are achieved in water and sanitation programs.

With the exception of Guatemala, most urban areas receive services from national water supply and sanitation companies, although there is some municipal provision of services. Nongovernmental organizations (NGOs) have tried to fill the vacuum in rural and peri-urban areas. Throughout the region there is confusion about service provision, sector planning, and regulation.

USAID involvement in the decentralization of water supply and sanitation services in the region

varies by country. In El Salvador, USAID has long supported the construction of rural systems by NGOs. USAID has also recently begun the AGUA project, which seeks to increase rural residents' access to clean water in an environmentally sustainable way. The Democracy Office in USAID/El Salvador is also actively engaged in strengthening municipalities and has supported the development of autonomous municipally owned companies in two places—San Julian and TETRALOGIA, a joint effort of six municipalities. In the Dominican Republic, USAID has long supported the efforts of NGOs to work with rural communities to build, operate, and maintain water and sanitation systems to improve health and has become involved in the development and implementation of a national strategy to decentralize responsibility for rural systems. In addition, USAID/Dominican Republic (DR) is now financing a major reconstruction program for rural water supply and sanitation that will support the nascent reform process.

In Nicaragua, USAID's efforts in decentralization have been associated with its municipal strengthening activities. In addition, USAID/Nicaragua is financing a reconstruction program for rural water systems that is expected to start in the summer of 1999. In Honduras, USAID activities have been in two areas. The Democracy Office has supported the improvement of municipal capacity to manage its systems. The Health Office has worked at restructuring SANAA, the national water and sewer company, and creating stronger regional offices, specifically to provide support to rural communities. Reconstruction funds for water and sanitation systems are also being programmed for Honduras. In Guatemala, USAID has long supported rural water and sanitation projects.

1.2 Scope of Work

This EHP activity had four objectives:

- C Provide technical assistance to selected missions engaged in decentralization of water and sanitation systems
- C Draw lessons learned from the efforts of USAID and others
- C Disseminate the lessons learned to interested

individuals and organizations

- C Promote sharing of experience among the Central American countries

The scope of work called for EHP to implement the activity over a one-year period in three phases. Phase I focused on a regional analysis of the current status of decentralization in the five target countries. EHP commissioned a study with a Honduras-based firm to carry out this analysis. In addition to the regional analysis, Phase I called for establishing an electronic network, called DECNET, for sharing information among the organizations on the decentralization of water and sanitation systems.

Phase II was the provision of technical assistance to selected USAID missions. Originally, the activity requested EHP to provide technical assistance to three countries: El Salvador, Honduras, and the Dominican Republic. Ultimately EHP provided technical assistance only to El Salvador and the Dominican Republic. USAID/Honduras wanted EHP to focus on the issue of regulation of municipal companies, but unexpectedly, the issue had to be addressed immediately before EHP was ready to start the activity. Hurricane Mitch also led to a change in priorities, and the decentralization activity became secondary in importance. EHP sent planning teams to El Salvador and the Dominican Republic in June 1998 to work with the missions and their counterparts to develop specific scopes of work for the technical assistance. The technical assistance was carried out between June 1998 and May 1999.

Phase III involved disseminating the results of the activity. This included a regional workshop to promote dialogue about decentralization among the target countries and donors. This workshop was held in April 1999 in Antigua, Guatemala. Phase III also included this final report and a debriefing in USAID/Washington.

1.3 Organization of the Report

The report is divided into five chapters. Chapter 2 describes the five major activities and resulting achievements. Chapter 3 captures the major lessons learned, and Chapter 4 provides recommendations and next steps.

2 DESCRIPTION OF ACTIVITIES AND RESULTS

2.1 Regional Analysis

The purpose of the regional analysis was to summarize the experiences of the five target countries in decentralizing water supply and sanitation services and identify the key issues that each country faces. To carry out the regional analysis, EHP identified a regional organization with prior experience in related issues. Keeping with the goals of JAIF-funded activities, the scope of work for the regional analysis specified that the decentralization of water supply and sanitation services should be looked at from a broad perspective that included service delivery, water resource management, governance, and health.

The EHP consultant visited all five countries to learn firsthand the current status of decentralization. The consultant visited USAID, key donors, and the relevant national agencies to determine what had happened in the past few years, what the successes and problems had been, and what the future plans were to reform the sector. In addition, written documents were collected in each country and analyzed. After the country visits and analysis of written information, the consultant drafted a report entitled *Regional Analysis of Decentralization of Water Supply and Sanitation Services in Central America and the Dominican Republic*. The report includes a review of the current status of decentralization and separate case studies on the five countries.

The basic conclusion of the regional analysis is that while most countries have been talking about reform, efforts have resulted in limited progress to date. State corporations with a national mandate for urban provision still dominate the formal urban sector, complemented by municipal arrangements in smaller cities. Only Nicaragua has enacted a comprehensive reform. In rural and peri-urban areas, NGOs have tried to fill the vacuum left by the national government, but have not come close to meeting the large need. The balance between national companies and municipal providers varies considerably by country. In Guatemala, virtually all urban systems are municipally owned and operated. In Honduras,

municipal providers account for 62% of urban water connections, but in El Salvador and Nicaragua, only 20% and 10%, respectively, of connections are provided by municipalities. The Dominican Republic has no municipal operators. Rural water supply and sanitation is theoretically the responsibility of the rural departments of the state water companies.

Other principal findings of the study are the following:

- C In all countries except Nicaragua, there is confusion about roles in planning and regulation and provision of services. In urban areas, national water companies are responsible for their own planning and are not regulated. Where municipal provision of services exists, the municipal councils decide on investment plans and tariffs and are self-regulating. National planning offices have been proposed everywhere but Guatemala.
- C Addressing sectoral issues for rural and peri-urban areas has not been a major concern in reform efforts to date. NGOs have generally been the most effective agencies in implementing rural and peri-urban water supply and sanitation programs. They typically work closely with the community to identify and construct the project and then turn over operations to community-based committees. In recent years, Nicaragua and Honduras have established more effective departments within the national water companies for providing support to rural communities. The Dominican Republic has developed but not yet implemented a promising strategy for rural systems.
- C Although decentralization is an overall goal of the state modernization process, it has not translated into a consensus to municipalize responsibility for provision of water supply and sanitation services. In El Salvador and Honduras, the reform process has led to conflicts between the central government and municipalities. Only in Honduras has municipalization been a central theme in the

reform debate, although in El Salvador pressure is increasing for municipalization of services and the new government has recently supported decentralizing to municipalities.

- C Effective environmental regulation does not exist. Specifically, neither the regulatory framework nor its enforcement are protecting water sources, regulating water use, or monitoring the impact of sewage on receiving bodies. These concerns have only begun to be reflected in the legal framework.
- C As yet, concrete evidence does not exist that decentralization improves cost recovery. Municipalities have not shown the inclination to increase tariffs. In fact, they may be more likely to charge below-market rates than state-owned companies would because of local political pressure. In rural areas, community-based approaches have led to improved cost recovery of operating expenses, but initial capital investments are provided by the national government and external sources.

2.2 Technical Assistance to El Salvador

The government of El Salvador has been considering how to modernize its water and sanitation sector and the role that decentralization will play in that process. The IDB, in particular, has provided support to the reform process in the past few years. The IDB has approved a \$60 million loan that is contingent on approval by the government of a sector reorganization. During the scoping visit, the planning team concluded that the most useful technical assistance would be to focus on national policy and to coordinate closely with the IDB-supported reform program.

The IDB-supported program has focused on establishing the legal and regulatory framework. The proposal called for the establishment of a national water resources authority that would in turn establish a regulatory authority for water supply and sanitation services. Once these regulatory authorities were established, the plan would address the commercial restructuring of the sector. EHP found this plan very logical and decided to concentrate its efforts on the policy issues related to the commercial restructuring of service delivery and the creation of a participatory process in which municipal and national-level

stakeholders could be heard.

The EHP activity directly supported USAID/El Salvador's Strategic Objective (SO) No. 4 in integrated water resource management, which includes the provision of safe drinking water to rural households and improved municipal management of water resources and water delivery systems. The AGUA project under SO4 did not originally envision a policy component, but USAID began to see that the sustainability of services in the municipalities would depend in part on national policy.

The El Salvador technical assistance was designed, therefore, with two principal goals:

- C Contribute to the national dialogue on the decentralization of water supply and sanitation services by addressing several key issues and constraints
- C Support USAID/EL Salvador activities related to the decentralization of water supply and sanitation services

Five specific activities were conducted:

- C A study to identify management options to support sustainable municipal water supply and sanitation systems. Officials with years of experience in the water and sanitation sector argue that municipalities are not capable of managing the systems themselves. Others suggest that local control and accountability are the best way to improve services. Five potential options to support sustainable municipal systems were identified. These included management by regional offices of the national water and sewer company (ANDA), municipalities (either direct administration or a separate municipally owned company), local associations, NGOs, or private firms under contract to the national government or municipalities.
- C A study to identify options for institutional arrangements to support community-managed rural water supply and sanitation systems. Although broad agreement exists about the importance of establishing community-managed systems, it is not yet understood how to support the communities in operations and maintenance, financial management, community organization, and hygiene education once the system is inaugurated. No

one monitors the performance of these rural systems, and there is no effective structure in place where rural communities can turn when they need help. By default, they turn to the municipality or to the NGO that constructed the system. The study identified three possible sources of support: autonomous organizations such as a municipal company, NGO, or a private firm; regional offices of ANDA; and a newly created agency specializing in rural water supply and sanitation that contracts with NGOs or private companies to provide services.

- C Organization of three workshops to improve the understanding of municipal officials of managing water supply services on a commercial basis. Municipalities generally have a very limited understanding of what is involved in managing a water supply and sanitation system and what options are available. Three two-day workshops were organized for 119 persons including 87 municipal officials representing 62 municipalities.
- C Organization of two workshops to improve the understanding of municipal officials of watershed management issues and their linkages to the provision of water supply and sanitation services. Two one-day workshops for 79 participants were organized to begin to raise awareness of local environmental issues and the potential use of municipal laws and regulations to improve water quality and protect watersheds.
- C Organization of a national-level workshop to raise awareness and support for decentralization of water supply and sanitation services. The final JAIF-funded activity was a national seminar to create a forum in which the key stakeholders representing a variety of interests could come together to discuss decentralization. The workshop focused on bringing everyone up to date on the IDB-reform proposal and included in-depth discussions on the two EHP studies to identify options for managing municipal systems and providing backup support to rural communities.

El Salvador Results

Created a participatory process that involved multiple

interests. The activity created a process of national dialogue involving a wide range of stakeholders. Prior to the JAIF activity, only ANDA had participated in reform discussions with IDB. Virtually everyone EHP talked to was unfamiliar with the IDB-sponsored reform proposal. This lack of public participation created both an information gap and resistance to the reform. This was unfortunate since the proposal is basically sound and provides a good framework for reform.

Each of the five tasks that EHP conducted was done in a participatory manner. For both studies, EHP organized half-day review sessions with key stakeholders to provide feedback to the consultant teams. This helped to refine the options and to allow a range of stakeholders to get involved. To develop their recommendations, the teams consulted with a wide range of people. The workshops for municipal officials helped to begin to create an informed constituency that would be able to participate more effectively in the policy debate. The primary purpose of the national workshop was to engage the key stakeholders in the discussion and determine which management options for municipal and rural systems had the greatest potential.

This activity produced an informed constituency, which is now capable of engaging in the discussions as the reform process moves forward. There is also broad consensus to move forward with reform.

Broadened the focus of the discussion. The primary focus of the IDB-reform proposal was the improvement of the provision of services. Some mention was also made of broader water resources concerns. As a result of the JAIF activity, the discussion was significantly broadened to include a range of perspectives involving municipal government, rural water supply and sanitation, and environment.

- C When the activity began, articles appeared in the local newspapers stating that ANDA would never agree to cede responsibility for the provision of services to municipalities. ANDA's basic position was that the municipalities were not capable of managing a water supply system and that other options, including the use of the private sector, had to be explored. However, as the municipalities got involved, it became clear that they were

not interested in direct administration of services but in indirect provision through municipally owned companies or through concession contracts to private firms. The municipal perspective has become a central part of the discussion and has become, in fact, the central policy of the new government.

- C Rural water supply and sanitation is now an integral part of the discussions and not an afterthought. Although the IDB-sponsored proposal mentioned rural communities, it simply stated that the community-based approaches promoted by USAID should be continued. Organizations working in rural areas were invited into the process to represent the interests of rural communities.
- C Environmental concerns are now part of the national debate on decentralization. The Ministry of Environment and Natural Resources was a full partner in organizing the workshops on watershed management for municipal officials. Municipalities are starting to make the connection between environmental concerns and the provision of water and sanitation services.

Positioned USAID as a key player. USAID was not involved in broader discussions of the decentralization policy prior to the JAIF activity. In past activities, USAID has focused its efforts in municipalities and in rural communities and on developing innovative methodologies and approaches. For example, in San Julian, a small municipality of 2,000 inhabitants, USAID has helped the municipality set up an autonomous company to manage the municipal water system. This provided a very useful example of what can be achieved. The JAIF activity, however, placed USAID in a more visible national role. EHP made a conscious decision not to advocate a particular model of reform but rather to play a neutral role and act as a facilitator. This proved to be a very important decision in that all sides were willing to engage in the process and participate in the events since they knew EHP was trying to act as an honest broker.

Recognized USAID impact on national policy. When the JAIF-funded activity ended in January 1999, USAID/El Salvador decided to continue funding EHP until June 1999. Then presidential candidate Francisco Flores made decentralization of water

supply and sanitation services one of his main campaign priorities, and it became a hotly debated issue in the campaign and the media. Recognizing that USAID was well positioned to influence the policy, the mission agreed to provide additional funding. The focus of EHP's work during January to June 1999 had been to disseminate findings and continue to engage municipal and national officials. EHP conducted additional workshops for municipal officials, congressional deputies, and private sector leaders. Articles were written for the newspaper. The EHP team leader was asked to be a member of a seven-person commission to develop the new government's policy on decentralization. The analytical work and relationships developed by EHP team members have clearly resulted in USAID being able to play a key role. In early June, after President Flores was inaugurated, he announced his government's position that municipalities will be at the heart of the reform of the water supply and sanitation sector. The details remain to be worked out in the coming year.

2.3 Technical Assistance to the Dominican Republic

In October 1996, at the request of USAID/DR, EHP provided assistance to the Mission's Health SO2 team in developing the water supply and sanitation component of a new integrated health strategic objective. EHP and the Mission SO2 team carried out an extensive consultation process with the public and private stakeholders in the Dominican water supply and sanitation sector and found broad consensus on a mission strategy. The key elements of the new strategy were as follows:

- C Phase out direct USAID funding of rural water supply and sanitation service delivery and facilitate funding to NGOs from the Government of Dominican Republic (GODR) and other external donors
- C Join forces with UNICEF and the Pan American Health Organization (PAHO) to advocate with the GODR and other donors for attention to water supply and sanitation and hygiene education needs of the rural and peri-urban poor
- C Participate in the national water supply and sanitation sector reform dialogue with the

GODR and other external support agencies (ESAs), especially PAHO and the IDB

- C Participate in the national policy dialogue regarding cost-effective approaches to providing these services to the rural and peri-urban poor

This strategy laid the foundation for mission involvement in sector reform. In late 1997, with encouragement from USAID, IDB, and PAHO, the then recently elected GODR initiated efforts to reform and modernize the water supply and sanitation sector. The National Institute for Potable Water and Sewerage in the Dominican Republic (INAPA) initiated a process of decentralization and announced a policy to transfer the administration, operation, and maintenance of rural water supply systems directly to the rural communities. The JAIF regional decentralization activity allowed USAID and EHP to support this process. EHP provided technical assistance to INAPA in the design of an action plan that INAPA could implement to decentralize and transfer the responsibilities for the administration, operation, and maintenance of existing rural water systems directly to the beneficiary communities. In addition, EHP assisted the mission and INAPA in developing a technical assistance work plan to be provided by EHP that would support the process of implementing a national program to decentralize rural water supply and sanitation.

The essential concept that EHP presented in the decentralization strategy framework paper was that INAPA would move away from its traditional direct construction approach to rural water supply and evolve into a role of sector planner, coordinator, and monitor. It was recommended that INAPA organize a very small rural water department with a highly talented staff into three interdisciplinary teams (technical staff mixed with social promoters). One team would coordinate the process of community entry and promotion and design for new systems or, for preestablished systems, coordinate a community promotion and education approach to formation of local community water supply associations to assume responsibility for self-management. The second interdisciplinary team would coordinate follow-up activities to support the long-term operation and maintenance and renewal of communities that had formed their self-management association. The

third team would work as administrative support and provide program leadership and coordination. To fulfill this activity, INAPA would hire either NGOs or private sector firms with demonstrated experience in community participation approaches to rural water supply. The INAPA staff would consist of 15 or fewer people.

To support the implementation of this strategy, EHP developed a technical assistance program with the following objectives:

- C Strengthen INAPA's capacity to decentralize the ownership, operations, and management of rural water supply and sanitation services to rural communities.
- C Support the implementation of the pilot project Hato Mayor and ensure that the lessons learned are incorporated into the future scaling up of the decentralization program. (Hato Mayor was a region selected to pilot test the strategy.)
- C Share results, experiences, and lessons learned in decentralizing water supply and sanitation services with other countries in the region.

EHP was to provide the following technical assistance:

- C Assist INAPA in developing technical and procedural norms and standards appropriate for providing water supply and sanitation services in rural areas
- C Assist INAPA's rural water supply and sanitation department in reengineering its functions from implementers/builder of water supply systems to regulator, supervisor, and promoter of rural water supply and sanitation systems
- C Assist INAPA's rural water supply and sanitation department in strengthening its internal management capability and team and its ability to manage NGO and private sector contracts
- C Assist INAPA with the design and implementation of a monitoring and evaluation program for the Hato Mayor pilot project, analyze and document the experiences, and incorporate the lessons learned into decentralizing rural water supply and sanitation services on a national scale
- C Assist INAPA and SESPAS (the Ministry of

Health) in assessing existing approaches and institutional roles and responsibilities in rural sanitation at the household level and in making changes as appropriate to ensure the country receives the maximum preventive health impact

Activities were initiated with the project start-up workshop for the Hato Mayor region. The activities to support the development of engineering norms and the initial study for sanitation were started concurrently. In October 1998, follow-up activities for norms and sanitation were continued. At the time the management-strengthening activities were scheduled to begin in November 1998, a devastating hurricane (Georges) interrupted the work and focused all INAPA (and USAID) activity towards disaster relief, thus stopping planned activities.

Prior to work stoppage, however, the new director of INAPA and the deputy director had raised a number of questions about the direction of the effort. The concept of using NGOs as rural water system designers and constructors was raised. (This has always been a question within the traditional engineering department of INAPA.) Contributions promised by the original INAPA director for construction in the pilot project were not honored by the new director, and support for developing the capacity of INAPA for rural water supply was temporarily withdrawn.

This change in direction was maintained until May 1999. INAPA had requested USAID to evaluate NGOs' technical capacity to design and construct rural water systems and compare these systems with the quality provided by private sector contractors. Conducted in April 1999, the study detected no perceptible difference in technical quality.

In May 1999, the director of INAPA decided to resume planned program activities. He made a commitment to USAID to contribute to the Hato Mayor pilot project trust fund, and a revised project implementation letter was issued. In addition, the rural water supply and sanitation department was revised, and INAPA made a commitment to fully support the concept of NGO collaboration and departmental development. The INAPA director also requested EHP and USAID to resume their planned technical assistance activities.

Dominican Republic Results

USAID/DR has been established as a credible and effective player in the policy reform process. Prior to this set of activities, USAID had been successful in financing and implementing (through NGOs) effective rural water supply and sanitation projects but was not seen by the GODR or other ESAs working in the country as having much to contribute to the policy discussion on sector reform. As a result of this activity, USAID is now seen by both the GODR and key ESAs as an important actor in the reform policy discussions, especially as it relates to decentralization. INAPA views the work done by USAID and the NGOs in implementing rural water supply and sanitation projects as a model to replicate, and the IDB literally pasted the USAID/EHP rural water supply and sanitation strategy design into its own document for reforming the sector countrywide. In addition, given INAPA's positive experience with USAID on rural decentralization, it has asked USAID for assistance in doing a feasibility study for the privatization of an urban (secondary city) system.

Attention is being paid to the rural sector in the reform process. This intervention has ensured that the specific needs and issues related to rural communities have been considered in the overall sector reform policy discussions among GODR stakeholders, the NGO community, and the ESAs such as the IDB, UNICEF, and PAHO.

The Hurricane Georges rural water supply and sanitation reconstruction project has been designed consistent with the decentralization approach. USAID is currently using emergency child survival and supplemental reconstruction funds to help rebuild rural water systems damaged by Hurricane Georges. In contrast to traditional emergency programs, this project was designed to be consistent with the principles being promoted by USAID regarding decentralization of decision making, local ownership, operations and maintenance of the systems by rural communities, and a monitoring role by INAPA.

The GODR/INAPA policy decision to move forward with decentralization was put back on track. As discussed earlier, many of the planned activities were derailed as a result of Hurricane Georges

and the change in leadership of INAPA. Perhaps the major result of this overall activity has been that in spite of the two formidable roadblocks, INAPA has agreed to once again move forward with the decentralization policy and strategy as designed by USAID/EHP, including the Hato Mayor pilot project and the technical assistance to support the process. The revitalization of this program is a result of USAID consistently advocating the approach and making every effort to keep the dialogue open with INAPA. In addition, the participation of INAPA staff in the regional workshop in Antigua reinforced the innovativeness of the rural decentralization strategy, which helped get it back on track.

2.4 DECNET

The purpose of this activity was to promote and facilitate the exchange of information among stakeholders in a timely and efficient manner on the issues relating to decentralization of water and sanitation services in Central America and the Caribbean. To accomplish this, an Internet-based network called DECNET was created for sharing information on decentralization. The following were key components of this activity:

- C Establish a core network group from the relevant USAID stakeholders and other relevant entities involved with decentralization in the water and sanitation sector
- C Identify information resources (inside and outside the sector) on decentralization by soliciting the core network group
- C Develop and obtain initial or introductory material that the group could access
- C Compile resources and material to be made available through network access
- C Install listserver software and establish an e-mail account
- C Early in the activity, explore ways to ensure the sustainability of the network and make every effort to see that it is sustained.

DECNET Results

Established a dynamic network with 142 members from 17 countries. This activity resulted in an operating communications network that connects 142 members from 17 countries. Members include individuals, practitioners, and researchers, and

USAID staff from around the world participate as well. DECNET members have access to interesting and thoughtful materials and country experiences on decentralization. Real world case studies and lessons learned are being shared; new publications are being made accessible through the Internet; and dialogue is ongoing among a wide range of sectors (environment, health, democratization, and others).

2.5 Regional Workshop

The regional workshop on the decentralization of water supply and sanitation services was held April 28-29, 1999, in Antigua, Guatemala, and was the culminating event of this activity. The overall purpose of the workshop was to assess progress made in developing and implementing decentralization programs for water supply and sanitation services in the past few years and determine the major issues that must still be resolved.

The following were specific goals of the workshop:

- C Share experiences of the last few years in implementing decentralization programs
- C Identify what has worked and what has not
- C Identify the trends and common themes that national governments, municipalities, rural communities, and other groups face in reforming the sector to improve the delivery of water and sanitation services

EHP's intent was to limit the number of workshop attendees, thereby keeping the level of participation high. A diverse group of 66 participants attended the workshop. They included 57 participants from the five target countries: nine from Honduras, 10 from Nicaragua, 10 from the Dominican Republic, 12 from El Salvador, and 16 from Guatemala. In addition, IDB and UNICEF sent participants from headquarters, and PAHO sent a regional staff member from Costa Rica. The other participants were from EHP and USAID/Washington. The participants fell into five categories: large urban utilities, local government (including mayors and small system managers), rural water supply and sanitation, policymakers, and health and environment. USAID's Latin American Bureau's Office of Democracy and Human Rights provided funding

for municipal representatives to participate. UNICEF, PAHO, and IDB also funded participants.

The focus of the first day was on assessing the current status of decentralization and identifying the obstacles that needed to be overcome. Country representatives gave presentations on the current status of decentralization in their countries, a presentation was given on the regional analysis described in Section 2.1, and working groups identified obstacles that prevented further progress. The principal obstacles fell into six areas: lack of effective regulation, inadequate attention to health and environmental concerns, inability to reach consensus among key stakeholders, lack of political will, absence of a legal framework, and inattention to the effect of reform on the rural and urban poor.

The second day of the workshop focused on identifying ways to overcome the obstacles that had been identified. Case studies from the Dominican Republic, Honduras, and El Salvador were presented as examples of what can be accomplished. The Dominican Republic case study concerned the plan for the national water agency, INAPA, to establish a regional structure, contract with NGOs to work directly with rural communities, and change its role from a service provider to a facilitator and regulator. The Honduras case study was on the decentralized regional structure of the national water company, SANAA, and how it provided services to La Ceiba, a small municipality. The El Salvador case study featured the small municipality of San Julian, which has established a separate, municipally owned water company. Work groups examined how the obstacles to decentralization could be overcome.

Suggestions included the following:

- C Establish a national level consultative process involving the full range of actors
- C Develop a strategy to broaden the objectives of reform to include health and environmental concerns
- C Develop a communication strategy as an integral part of the reform process
- C Make a concerted effort to build support among decision makers
- C Include organizations that focus on rural and peri-urban water and sanitation in the reform process

In the final activity, each country delegation was asked to identify lessons learned in the workshop and recommend some specific and high-priority actions that should be taken over the next 6 to 12 months to advance the reform of the water and sanitation sector.

During the workshop several key themes emerged from the presentations, case studies, and group discussions.

- C Reforming the sector requires the involvement of a broad constituency and multiple perspectives including the water and sanitation sector itself, local government, health, and environment.
- C The use of a participatory process that involves the key actors at national and municipal levels is a key element of any reform program. Without meaningful participation, the reform is much less likely to take into account the interests of all parties and gain support.
- C In any reform process, explicit attention must be paid to the rural and urban poor to ensure they are not overlooked.
- C Each country needs to develop its own approach to reform since circumstances vary in each country. No one model is applicable in all situations.
- C Political will is a key ingredient in successful reform efforts. Achieving consensus at the political level is virtually a prerequisite for reform.
- C Separation of the planning and regulatory functions from the operating function is a necessary condition of any reform program.
- C Decentralized approaches are elemental to bringing improved water and wastewater services to consumers.

Regional Workshop Results

Facilitated an exchange of information and experiences. Participants in the workshop learned about the experiences of other countries in the region, many of which are facing similar problems. Although the shape of reform will surely vary by country, examples of what others have done can serve as a source of ideas. Countries have focused on different issues. For example, the Dominican Republic has focused specifically on decentralizing its approach to rural water supply and sanitation while El Salvador has not focused

on rural communities to date. It was useful for the El Salvador delegation to learn about the Dominican experience in this area. The experience of Nicaragua was especially insightful since it is the only country that has enacted a comprehensive reform program. The workshop format promoted this type of exchange and was very successful in exposing participants to what other countries have done.

Brought country delegations together. An unexpected result of the workshop was the way country delegations came together. Some of the delegations were especially diverse and had not worked together previously. In Honduras, for example, the delegation included representatives of both the national and municipal perspectives. Honduras has struggled over the issue of the importance of national regulation of municipal management of water and sanitation systems. The national government has sought regulation while the municipalities have fought it. During the workshop, representatives of the two sides saw the need to talk to each and work out an agreement, laying the groundwork for a possible rapprochement. The El Salvador delegation, one of the largest, also reached common ground on the critical issue of having an open participatory process.

Broadened the paradigm for reform. Perhaps the most

important result of the workshop was how it broadened participants' perspectives. Many of the participants arrived with a narrow paradigm primarily reflecting their own viewpoint. Clearly the dominant focus was how to improve the provision of water and sanitation services, especially in urban systems. During the course of the two days, participants gained a heightened appreciation for the need to take into account a range of perspectives including municipalities, peri-urban and rural communities, and health and environment. As reform moves ahead in the various countries, those who attended the workshop will surely be more sensitive to a wider range of concerns.

At a regional level, the results are similar to what has been discussed in this chapter. The issue of decentralization has been framed more broadly to take into account other perspectives. Consistent with a broad perspective of decentralization, the stakeholders that have been involved are more diverse. Although significant progress has been made in including a wider range of stakeholders, more remains to be done. This activity opened up the process to more viewpoints and interests, but did not go nearly as far as is needed. In particular, the health and environment sectors need to be more fully engaged. Finally, USAID has established ties with PAHO and the IDB on decentralization in the region that can provide the basis for continued collaboration.

3

LESSONS LEARNED

There is significant and growing interest within the region on the reform of the water supply and sanitation sector and decentralization.

All five target countries are engaged in the reform and modernization of the water and sanitation sector. Nicaragua has already enacted a comprehensive reform program. Honduras has experimented with various options in the past several years, but has not yet decided upon a comprehensive program. El Salvador and the Dominican Republic are currently developing reform programs and can be expected to agree on a model soon. Guatemala is just beginning to consider ways to reform although the issue has long been recognized as important. In addition, donors such as the IDB, PAHO, and UNICEF are providing needed support to Central American countries. In some countries, decentralization is given added impetus by national efforts to strengthen municipalities and transfer resources to local control. The momentum can be expected to continue in the region, creating a very favorable climate for further assistance. It should be recognized, however, that it takes time for a critical mass of stakeholders to reach consensus on reform.

The issues related to decentralization of water supply and sanitation services are common although the solutions may vary by country.

The regional analysis and the regional workshop pointed to the similarity of issues that each country is facing. Every country except Nicaragua lacks a planning and regulatory function that is separate from the operating entities. Each country has large rural and peri-urban populations, and to date, they have not been the focus of concern in decentralization efforts. The role of the municipality in decentralization is in question in most of the countries. All countries are beginning to appreciate the need to address environmental

concerns in any decentralization program. In spite of the similarities of the issues, the solutions will vary from country to country. Nicaragua's reform model is based on the deconcentration of regional offices of INAA, the national water and sewer company, and the establishment of a separate regulatory agency. Honduras' reforms to date have involved both the deconcentration of SANAA and the devolution of responsibility to municipalities. Each country is sufficiently different that the solutions will not be the same. The political context, urban/rural split, degree of municipal decentralization, and water resource situations vary in each country.

USAID can bring added value to the process by bringing an integrated perspective to this issue.

USAID can naturally approach this issue from a variety of perspectives. In fact, in the five USAID missions in the region, the lead role in decentralization is being played by different offices within the missions. Depending on the mission, the health office, democracy office, or environmental office is taking the lead on this issue. In El Salvador and the Dominican Republic, offices within the missions are working together. The fact that this activity was carried out with JAIF funding implicitly recognizes the intersectoral nature of decentralization. This activity was implemented with the assumption that all these perspectives must be taken into account and the legitimate interests of all these sectors must be heard and incorporated into reform programs. Decentralization of water supply and sanitation services can touch upon the four agency objectives relating to environment, health, democracy, and economic growth.

Pilot demonstration activities can have great value in demonstrating what is possible.

This activity demonstrated the value of

demonstration projects. In the Dominican Republic, the “Total Community Participation Model” for rural water and sanitation projects developed by USAID became the basis for the national strategy adopted by INAPA. In El Salvador, the support to the municipality of San Julian, a small municipality of 2,000 people, demonstrated that it is possible for similar municipalities to establish a separate, municipally owned water company. In Honduras, the Technician for Operations and Maintenance (TOM), modeled after the circuit rider system in the United States, demonstrated a way in which rural communities could be supported by regional offices of a national agency. TOMs operate from a regional office and provide support to rural communities in their respective regions. These and other examples funded by USAID and other donors help inform national-level discussions and ground them in actual experience.

It is important to work both bottom up and top down on decentralization.

One of the key lessons learned on this activity is

the need to work both from the bottom up and the top down on decentralization. Decentralization can result in the sometimes undesired recasting of roles and responsibilities of key stakeholders. Without high-level direction and political support, key stakeholders will be unlikely to reach agreement. On the other hand, communities and municipalities that are the consumers of water supply and sanitation services must also be consulted and included in the national dialogue. Mayors, community leaders, and organizations that represent their interests must be consulted. In El Salvador, EHP simultaneously made a concerted effort to inform the municipalities so they would be better able to participate in the national-level debate and strived to develop good working relationships with national-level staff. To be successful, decentralization must work both from the top and the bottom.

The pilot activities and the bottom-up activities showed that much can and should be accomplished within the existing regulatory/policy framework to further the reform process.

4

RECOMMENDATIONS

This has been a highly successful activity that has generated significant interest at USAID/Washington and in the region. To keep the momentum going, several suggested next steps are presented.

4.1 Country Level

El Salvador. USAID/El Salvador is considering continued support to develop the national policy for decentralization of water supply and sanitation services. Given the high-level political support for decentralization from the new government and the constructive role that USAID has played to date, ongoing assistance will build on the efforts of the past year. The mission is considering the scope and extent of continued assistance.

Dominican Republic. USAID/DR has agreed to support INAPA in its effort to implement the strategy to decentralize services to rural communities. Now that the activity is back on track, the original work plan has been revised and the mission has allocated funding to provide support in 1999 to 2000. This work will be carried out in conjunction with a large two-year rural water supply and sanitation reconstruction program. In addition, INAPA has requested USAID support in studying the feasibility of privatizing smaller urban systems as part of the reform package.

Nicaragua. USAID is preparing a two-year Mitch reconstruction project. This new project, which is scheduled to begin in the summer of 1999, is designed to support the comprehensive reform program adopted by Nicaragua. Although the primary purpose of the project is to rehabilitate and construct water and sanitation systems, it is designed to work within the new decentralized structure and provide some assistance to strengthen the structure.

4.2 Regional Level

EHP believes there is an important role that can be played at the regional level. One of the advantages of working in Central America is the relative similarity among the countries and their close proximity to one another. As a result of this activity, EHP has identified several needs that could be addressed at the regional level.

Document successful examples. During the course of implementing this activity, EHP identified a number of interesting and relevant case studies. Three of these were presented at the regional workshop in Guatemala. Documenting these examples and publishing them would help disseminate this information to a wider audience.

Provide guidance on the regulatory issue. In Honduras, the issue of central government regulation has proved contentious. This issue is also expected to arise in El Salvador and Guatemala, although it is too early to be sure it will be as contentious as in Honduras. Providing guidance on how this issue can be handled without compromising the authority of municipalities could be very useful. Finding examples from other countries, including North America and Western Europe, and documenting them could help these countries productively deal with a difficult issue.

Continue to promote exchange and dissemination of lessons learned. One of the benefits of the JAIF activity was the sharing of information and lessons learned among the countries. Although there are regional institutions that could conceivably do this, none of them is focused specifically on this issue nor do any have the necessary resources. In addition, USAID brings an integrated perspective to decentralization that affects the type of information that gets shared. Finding a way to continue this important role in the coming years is an element that will contribute to making progress

in reforming the sector.

Provide guidance on how to include the rural and peri-urban poor in the reform process. There is relatively little literature on how decentralization affects the rural and peri-urban poor and what can be done. Clearly, community-managed rural water supply and sanitation systems is a form of decentralization, but rural communities also need intermediate structures that are responsible for overall monitoring, and they need access to technical assistance. Peri-urban systems also require the same services. A document that summarizes the issues and options available would be a useful contribution.

Provide guidance on how to include health and environmental concerns in decentralized programs. Health and environmental concerns have been largely overlooked by planners of decentralization programs. How can water and sanitation agencies ensure that health outcomes are considered in setting priorities and managing a decentralized water system? How can a municipality, for example, coordinate with the local office of the Ministry of Health to develop hygiene education programs that can increase health benefits? Similarly, it is important to determine what environmental responsibilities a municipal company or locally contracted private firm has. Providing guidance on these issues will take the discussion from the theoretical to the practical.

4.3 USAID/Washington

Explore the possibility of a similar activity in other USAID bureaus. Decentralization of water and sanitation systems is a worldwide phenomenon, yet

the issues differ from one region to another because of different political systems, different institutional settings, more or less abundant water resources, and varying environmental conditions. The power of this issue, however, as a way to integrate the different sectors in which AID works will be true in any region. USAID might want to determine if mission programs would be conducive to planning similar activities in other regions.

Continue involvement with other donors. In Central America, decentralization can only be addressed in concert with other donors. As has been said previously, IDB in particular provides a majority of the external financing for the water and sanitation sector and has been the prime mover for sector reform. PAHO and UNICEF are also quite active in the water and sanitation sector in most countries in the region. USAID should maintain these ties in any future decentralization activities.

Continue to promote intersectoral efforts like JAIF within USAID. Decentralization of water and sanitation systems is inherently an intersectoral issue although it is not always addressed from a variety of perspectives. Having only a municipal perspective, for example, or only an environmental perspective will be limiting. One of the roles USAID/Washington can play is to provide the incentives for centers to collaborate on this issue. The Water Team is an example within USAID of how different perspectives can be brought to bear around one issue. How to create the conditions for this type of collaboration within USAID/Washington requires further consideration.

APPENDIX A: List of Participating Consultants

El Salvador

Fred Rosensweig, Activity Manager
Carlos Linares, Team Leader
Luis Moncada, Institutional Specialist
Magno Tulio Sandoval, Legal Analyst
Gustavo Martinez, Institutional Specialist
Roberto Arguello, Rural Water and Sanitation Specialist
Roberto Hart, Utility Management
Mauricio Silva, Facilitator and Training Specialist

Dominican Republic

Eduardo Perez, Activity Manager
Dan Edwards, Institutional Specialist
Andy Karp, Rural Water and Sanitation Specialist
Janelle Daane, Environmental Engineer
Mike Favin, Behavior Change Specialist

Regional Analysis

Max Velasquez, Institutional Specialist
Ian Walker, Institutional Specialist

DECNET

Dan Campbell, Information Specialist

Regional Workshop

Fred Rosensweig, Activity Manager
Eduardo Perez, Co Activity Manager
Dan Edwards, Facilitator
David Fernandes, Workshop Coordinator
Christine Lenhoff, Local Workshop Coordinator

APPENDIX B: List of Reports Produced

El Salvador

Linares, Carlos, Magno Tulio, and Luis Moncada. November 1998. *Opciones de manejo para el suministro de agua potable y saneamiento a nivel municipal.*

Martinez, Gustavo and Roberto Arguello. December 1998. *Arreglos institucionales para el suministro de agua potable y saneamiento a nivel rural.*

Linares, Carlos. February 1999. *Talleres de capacitacion de alcaldes y otros funcionarios para el manejo de cuencas.*

Linares, Carlos and Fred Rosensweig. May 1999. *Decentralization of water supply and sanitation services in El Salvador.* EHP Activity Report no. 64. Arlington, Va.

Silva, Mauricio and Carlos Linares. November 1998. *Talleres de capacitacion de alcaldes y otros funcionarios para el manejo de empresas de agua potable y saneamiento.*

Silva, Mauricio and Carlos Linares. January 1999. *Seminario taller nacional—alternativas para el manejo de sistemas de agua potable y saneamiento en El Salvador.*

Dominican Republic

Edwards, Daniel B. September 1997. *Proceso de transformación de los acueductos rurales de INAPA en Empresas Comunitarias de agua potable (ECAP); Marco del Diseño de la estrategia.* EHP Activity Report no. 40. Arlington, Va.

Karp, Andrew and Janelle Daane. June 1999. *Dominican Republic: Evaluation of rural water and sanitation infrastructure construction.* EHP Activity Report no. 70. Arlington, Va.

Perez, Eduardo A., and Daniel B. Edwards. June 1998. *Work Plan: Decentralization of rural water and sanitation services in the Dominican Republic.* EHP Report for the File 192. Arlington, Va.

Viganó, Oscar. November 1997. *Developing a communications program for INAPA, Dominican Republic; Oct. 26-Nov. 22, 1997.* EHP Report for the File 166. Arlington, Va.

Regional Analysis

Walker, Ian and Max Velasquez. May 1999. *Regional analysis of decentralization of water supply and sanitation services in Central America and the Dominican Republic.* EHP Activity Report no. 65.

Regional Workshop

Rosensweig, Fred. June 1999. *Summary Report: Regional workshop on decentralization of water and sanitation services in Central America and the Dominican Republic, April 28-29, 1999, Antigua, Guatemala.*